Racefield

James City Service Authority

# 2014
# Annual Water Quality Report for Racefield (W-29) Water System
## Continuing Our Commitment


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## Yes! Your water is safe to drink!

The James City Service Authority (JCSA) provides safe water to enhance and sustain the Racefield community. Racefield is one of seven independent community water systems along with the County's Central Water System that the JCSA manages. Our goal is to furnish you with the best possible water at the lowest possible cost. We continually surpass all State and Federal health and safety standards. As our customers, we are pleased to provide you with this annual water quality report for calendar year 2014.

As part of the James City County government, the JCSA was created to acquire, construct, operate, and maintain an integrated water system in designated areas of the County. The JCSA is governed by a Board of Directors which holds hearings on budget and other financial matters, approves contracts, and approves changes to Regulations Governing Utility Service. The Board of Directors' meets on the fourth Tuesday of each month at 6:30 p.m. in the Building F Board Room, James City County Government Center, 101 Mounts Bay Road. These meetings are televised live on JCC TV's Channel 48, the local government access channel, or available on demand at jamescitycountyva.gov. Upcoming meeting agendas may be requested online or by calling 757-229-7421.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as people with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Call the Safe Drinking Water Hotline (800-426-4791) for guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other micro-biological contaminants.

## Where Does My Water Come From?

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Substances (referred to as contaminants) in source water may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban storm water runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

The Racefield Water System consists of two wells, one 5,000-gallon hydropneumatic tank, one 20,000-gallon storage tank, duplicate booster pumps, the distribution system and appurtenances. The wells are drilled to a depth of 228 and 300 feet respectfully and pump water from the Chickahominy-Piney Point Aquifer. The combined wells' design capacity is 43,200 gallons per day (gpd). During 2014 the well system produced an average of 9,056 gpd for 37 user connections.

## Source Water Assessment

The Virginia Department of Health conducted a Source Water Assessment of the Racefield Water System in 2001. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the source Water Assessment area, an inventory of known Land Use Activities and Potential Sources of contamination, susceptibility Explanation Chart, and Definitions of Key Terms. To obtain a copy of the Source Water Assessment Report, call 757-259-5416.

## Water Treatment Process

The JCSA is fortunate to already have high quality water coming from the Chickahominy-Piney Point Aquifer. While the water is safe, we provide a disinfectant in accordance with Federal regulations before the water enters the distribution system for consumption. The Racefield Water System disinfection process includes the injection of a liquid Sodium Hypochlorite solution at the well site prior to distribution. Chlorine residual tests are routinely taken to ensure the water system is thoroughly disinfected.

## Contaminants that Could Be in Water

All drinking water, including bottled drinking water, may contain small or trace amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Contaminants that may be present in source water include: microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; organic chemical and contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

## Additional Health Information

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The JCSA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 15 to 30 seconds or until it becomes cold or reaches a steady temperature before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at epa.gov/safewater/lead.

## Sampling Results

The JCSA tests for more than 100 contaminants to make sure the water you drink is safe. We are pleased to report that for calendar year 2014, the water delivered to your homes and businesses complied with all State and Federal requirements. The following regulated contaminant test results indicate samples with low level concentration of lead, copper, total xylenes, and total trihalomethane that are below allowed levels, which means our drinking water is safe to drink and poses no health risk. Not listed are many of the other contaminants for which we tested that were not detected.

## Test Results

The State allows us to monitor for some contaminants less than once per year, because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

## Naturally Occurring Bacteria

In 2014, 12 routine bacteriological and chlorine residual samples were taken from the distribution system. All samples were negative (absent) for both total and fecal Coliform.

## Questions

For more information about this report, or for any questions relating to your drinking water:

**General Manager**
757-229-7421

**Customer Service**
757-253-6800

**Emergency, normal hours**
7 a.m. - 3:30 p.m.
757-229-7421

**Emergency, after hours**
757-566-0112

**Special Information Hotline**
757-259-4911

**Water Conservation**
757-259-5416
jamescitycountyva.gov/bewatersmart

Racefield

## Regulated Contaminants

| Contaminant (units) | Violation | Range | Level Detected | MCL | MCLG | Date of Sample | Potential Source of Contaminant |
|---|---|---|---|---|---|---|---|
| Total Trilahomethanes (ppb) | No | NA | 6.0 | 80 | 0 | 8/20/14 | By-product of drinking water chlorination |
| Copper (ppm) | No | 0.012-0.027 | 0.023* | AL = 1.3 | 1.3 | 2012 | Corrosion of household plumbing |
| Total Haloacetic Acids (5) (ppb) | No | NA | 2.0 | 60 | 0 | 8/20/14 | By-product of drinking water chlorination |
| Free Chlorine (ppm) | No | 1.18-1.64 | 1.50** | MRDL 4 | MRDLG 4 | 2014 | Water additive used to control microbes |
| Total Xylenes (ppm) | No | NA | 0.0016 | 10 | 10 | 3/26/14 | Discharge from petroleum products |
| Flouride (ppm) | No | NA | 0.25 | 4 | 4 | 6/12/13 | Erosion of natural deposits |
| Ethylbenzene (ppb) | No | NA | 0.6 | 700 | 700 | 3/26/14 | Discharge from petroleum products |
| Gross Beta (pCi/l) | No | NA | 4.5 | 50*** | 0 | June 2011 | Decay of natural and man-made deposits |

* *90th percentile value*
** *Running Annual Average.*
*** *The MCL for Beta particles is 4 mrem/year, but EPA considers 50 pCi/l to be the level of concern.*

## Table Definitions

**AL** (Action Level): the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**MCL** (Maximum Contaminant Level): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**MCLG** (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**MRDL** (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG** (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

**ppm** (one part per million): the equivalent of a single penny in $10,000.

**ppb** (one part per billion): the equivalent of a single penny in $10,000,000.

**pCi/l** (picocuries per liter): a measure of radioactivity.

**NA**: Not Applicable.